



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/583,038

06/15/2006

Akio Nakamura

060453

6752

23850

7590

02/23/2009

KRATZ, QUINTOS & HANSON, LLP

1420 K Street, N.W.

Suite 400

WASHINGTON, DC 20005

EXAMINER

BASS, DIRK R

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

02/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/583,038

**Applicant(s)**

NAKAMURA ET AL.

**Examiner**

DIRK BASS

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/02)  
Paper No(s)/Mail Date 15 June 2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hamaguchi et al., JP 01006845.
3. Regarding claim 1, Hamaguchi ('845) discloses a method for measuring the optical characteristics of a colored liquid comprising:
- a. A dropping step of dropping a colored liquid (see "specimen dropping" in abstract) onto a transparent plate arranged horizontally (see "analysis slide 2", in abstract and fig. 9); and
  - b. A measuring step of measuring the optical characteristics of the dropped colored liquid from beneath the transparent plate (see "optically measures" in abstract, "projecting part 76", and "photometric part 77" in abstract and fig. 9).
4. Regarding claim 2, Hamaguchi ('845) discloses a method for measuring the optical characteristics of a colored liquid, wherein the measuring step comprises starting measurement when a predetermined time has passed after the start of dropping in the dropping step. It is implicit in Hamaguchi ('845) that a predetermined time has passed after the start of dropping in the dropping step based on the fact that the predetermined

time can be anything from 0 to any time delay chosen by the user of the system disclosed in Hamaguchi ('845) thus encompassing a "predetermined time".

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: still s

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamaguchi et al., JP 01006845 in view of Steenhoek et al., USPA 2002/0131043.

8. Regarding claim 3, Hamaguchi ('845) is relied upon as stated in the rejections above.

9. Hamaguchi ('845) further discloses a method for measuring the optical characteristics of a colored liquid, wherein the measuring step is performed using a spectrophotometer equipped with an illumination light (see "light source 79", in abstract

and fig. 9) and a receptor (see “projecting part 76”, and “photometric part 77” in abstract and fig. 9).

10. Hamaguchi ('845) fails to disclose a spectrophotometer including an integrating sphere.

11. Steenhoek ('043) discloses a method and apparatus for measuring the color properties of fluid (see abstract and ¶ 0002) including a spectrophotometer comprising an integrating sphere for collecting scattered light from a fluid illuminated by a light source (see ¶ 0032).

12. At the time of the invention, it would have been obvious to one skilled in the art to combine the analysis method of Hamaguchi ('845) with the integrating sphere of Steenhoek ('043) in order to analyze colored fluids containing properties which scatter light from a light source via a spectrophotometer equipped with an integrating sphere.

13. Claims 4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenhoek et al., USPA 2002/0131043.

14. Regarding claim 4, Steenhoek ('043) discloses an apparatus for measuring the optical characteristics of a colored liquid (see abstract and fig. 1) comprising:

c. A transparent plate arranged horizontally (see “fluid analysis cell 40”, and “viewing windows 42, 44”, fig. 3A);

d. A sampling means capable of collecting a colored liquid and dropping the collected liquid onto the transparent plate (see “fluid control unit 38”, ¶ 0033); and

- e. A measuring means for measuring the optical characteristics of the dropped liquid onto the transparent plate (see "spectrophotometer", ¶ 0016, and "integrating sphere", ¶ 0032).
15. Steenhoek ('043) fails to disclose the measuring means being positioned beneath the transparent plate.
16. At the time of the invention, it would have been obvious to one skilled in the art to place the measuring means beneath the transparent plate of Steenhoek ('043), since it has been held that rearranging parts of an invention involves only routine skill in the art (see MPEP 2144, section VI, part C, and *In re Karlson*, 136 USPQ 184).
17. Regarding claim 8, Steenhoek ('043) discloses an apparatus further comprising a frame-like flow prevention member, the flow prevention member being positioned on the surface of the transparent plate (see "spacer member 48", fig. 3A).
18. Regarding claim 9, Steenhoek ('043) discloses an apparatus, wherein the measuring means further comprises a spectrophotometer (see ¶ 0016) equipped with an integrating sphere (see ¶ 0032), an illumination light (see "light source", ¶ 0016), and a receptor (see "detector 20", ¶ 0029, and fig. 1).
19. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenhoek et al., USPA 2002/0131043 in view of Platt et al., USPA 2005/0019223.
20. Claim 4 is relied upon as stated in the rejection as set forth above.
21. Regarding claims 5-6, Steenhoek ('043) discloses a sample analysis apparatus (see ¶ 0046) further comprising:

- f. A transporting means (see "sample system 38", ¶ 0020, ¶ 0046 and fig. 2) for transporting a sample between a container and a sample analysis area;
  - g. A driving means (see "air-drive", ¶ 0046) for driving the sampling means to collect and drop the colored liquid; and
  - h. A controlling means (see "sample system 38", ¶ 0046 and fig. 2) for controlling the operation of the transporting means and the driving means when a predetermined time has passed (¶ 0044).
22. Steenhoek ('043) fails to disclose that the transporting means be robotically controlled on an X-Y plane.
23. Platt ('223) discloses an automated liquid delivery apparatus that is robotically controlled on an X-Y plane (see abstract) in order to perform high throughput analyses (¶ 0009).
24. At the time of the invention, it would have been obvious to combine the automated liquid delivery apparatus of Platt ('223) with the sample analysis apparatus of Steenhoek ('043) because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.
25. Regarding claim 7, Steenhoek ('043) fails to disclose an apparatus wherein the sampling means is in the form of a pipette or syringe.
26. Platt ('223) discloses a liquid delivery apparatus (see abstract) comprising a sample delivery means, wherein the sample delivery means is a capillary tube (¶ 0021-

0025). It is inherent in Platt ('223) that the capillary tube functions as a pipette, in that the liquid is drawn into the capillary tube via capillary force, and the liquid is dispensed by an external force.

27. At the time of the invention, it would have been obvious to one skilled in the art to combine the sampling means of Platt ('223) with the sample analysis apparatus of Steenhoek ('043) because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIRK BASS whose telephone number is (571) 270-7370. The examiner can normally be reached on Mon - Fri (9am-4pm).

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



Art Unit: 1797

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DRB/

Dirk R. Bass

/Jill Warden/

Supervisory Patent Examiner, Art Unit 1797

February 5, 2009